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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,031	04/27/2001	Rosa Uy	56629USA6A.002	1942

7590 06/20/2003

Attention: John A. Burtis  
Office of Intellectual Property Counsel  
3M Innovative Properties Company  
P. O. Box 33427  
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EXAMINER

BERMAN, SUSAN W

ART UNIT PAPER NUMBER

1711

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/844,031

Applicant(s)

UY ET AL.

Examiner

Susan W Berman

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05-30-2003 has been entered.

***Claim Rejections - 35 USC § 102 and/or 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tran et al (6,103,316) in combination with Dietz et al (5,670,557). Tran et al disclose a process for making electron beam polymerized emulsion-based acrylate pressure sensitive adhesives. Tran et al disclose that water-soluble suspending agents such as polyacrylic acid and polyvinyl alcohol can be used to stabilize the precursor emulsions (column 8, lines 48-58). Tran et al also teach addition of thickeners, such as a prepolymerized acrylate syrup (column 9, lines 37-44 and line 58 to column 10, line 10). The examples employ polyacrylic acid as suspending agent and/or an acrylic latex or a partially polymerized isooctylacrylate/acrylic acid as thickener. The method for making the emulsions, coating a substrate and irradiating the emulsion with electron beams is taught in column 11, line 63, to column 15, line 3, and shown in the Examples. Tran et al teach mixing under high shear conditions until the material forms droplets less than 1 micrometer in diameter and are homogeneous (column 12, lines 13-17). A mixture of hydrophobic and hydrophilic acrylate monomers, such as isooctyl acrylate and acrylic acid, is used in the examples. Although no initiators are present in the examples Tran clearly teaches that initiators may be included in the precursor mixture (column 10). Tran et al, as discussed above, teach macroemulsions.

Art Unit: 1711

Dietz et al teach polymerized microemulsion pressure sensitive adhesive compositions for use in biomedical articles. Dietz et al teach a method for making the microemulsion in columns 19-23, including irradiating the microemulsion to form a PSA in contact with a substrate (column 23, lines 1-18). Dietz et al teach that the polymerized emulsion PSA's have easily tailored PSA properties, such as adhesion and peel strength, to meet the adhesive requirements to mammalian skin in the field of health care. See column 24 and the discussions of biomedical electrodes, medical skin coverings and pharmaceutical delivery devices discussed in columns 25-33.

With respect to claims 1-8, It would have been obvious to one skilled in the art to employ the microemulsion taught by Dietz et al as the emulsion in the emulsion-based acrylate psa's taught by Tran et al for the following reasons. Tran et al and Dietz et al each teach pressure sensitive adhesive compositions comprising aqueous emulsions of hydrophobic and hydrophilic monomers. Tran et al teach that the emulsion should have a droplet size less than 1 micrometer, thus suggesting that microemulsions, which have a droplet size of less than 0.01 micrometers, would also be suitable. Thus one of ordinary skill in the art at the time of the invention would have been motivated to substitute the microemulsion taught by Dietz et al for the macroemulsion disclosed by Tran et al in order to obtain the advantages taught by Dietz et al. Dietz et al teach that the polymerized emulsion PSA's can be used in health care when adhesion to mammalian skin is involved and have easily tailored PSA properties, such as adhesion and peel strength. With respect to claims 9-13, 15 and 16, each of Tran et al and Dietz et al teach coating a substrate with an emulsion and irradiating the emulsion with electron beams to provide a pressure sensitive adhesive. It would have been obvious to one skilled in the art to employ the aqueous microemulsion taught by Dietz et al in the analogous method employing a macroemulsion composition and thickener taught by Tran et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a pressure sensitive adhesive incorporating the advantages of the microemulsions taught by Dietz et al.

Art Unit: 1711

With respect to claims 17-25, the partially polymerized acrylate syrup disclosed by Tran et al as thickening agent is considered to provide a solution of a polymer or copolymer of acrylic acid (column 9, line 59, to column 10, line 9. A prepolymerized acrylic acid thickener is taught in the examples in columns 21-22.

Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tran et al (6,103,316) in combination with Outubuddin (5,238,992). The disclosure of Tran et al is discussed above. Outubuddin teaches polymers uniformly dispersed in polymer blends obtained by polymerizing microemulsions of hydrophilic and hydrophobic monomers. See column 2, line 55, to column 3, line 60. Polymerization by UV irradiation or electron beam radiation is taught in column 7, lines 56-60. Outubuddin teach a method for making the microemulsion in column 8. Outubuddin teaches that the disclosed polymers have a demonstrated ability to conduct electricity, thus making them useful in applications where electrical conductivity is desirable (column 8, lines 62-66).

With respect to claims 1-8, It would have been obvious to one skilled in the art to substitute the microemulsion taught by Outubuddin for the macroemulsion in the emulsion-based acrylate psa's taught by Tran et al for the following reasons. Tran et al and Outubuddin each teach polymerizing compositions comprising aqueous emulsions of hydrophobic and hydrophilic monomers. Tran et al teach that the emulsion should have a droplet size less than 1 micrometer, thus suggesting that microemulsions, which have a droplet size of less than 0.01 micrometers, would also be suitable. Thus one of ordinary skill in the art at the time of the invention would have been motivated to substitute the microemulsion taught by Outubuddin for the macroemulsion disclosed by Tran et al in order to obtain the advantages taught by Outubuddin. Outubuddin teaches that the microemulsions provide highly uniform dispersions of polymers, improved compatability of otherwise incompatible polymers, improved processability due to enhanced thermal and mechanical properties and polymer blends having controlled porosity. With respect

Art Unit: 1711

to claims 9-16, each of Tran et al and Outubuddin teaches coating a substrate with an emulsion and irradiating the emulsion with electron beams to provide a polymeric product. It would have been obvious to one skilled in the art to employ the aqueous microemulsion taught by Outubuddin in the analogous method employing a macroemulsion composition and thickener taught by Tran et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a product incorporating the advantages of the microemulsions taught by Outubuddin.

With respect to claims 17-25, the partially polymerized acrylate syrup disclosed by Tran et al as thickening agent is considered to provide a solution of a polymer or copolymer of acrylic acid (column 9, line 59, to column 10, line 9. A prepolymerized acrylic acid thickener is taught in the examples in columns 21-22.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462.

The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9310 for regular communications and 703 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman  
Primary Examiner  
Art Unit 1711

SB  
June 19, 2003